

What is claimed is:

1. A lighting assembly, comprising:
 - a mounting having a concave mounting surface and defining an indexing channel;
 - a seat having a front and rear surface, said seat including an indexer at the rear surface thereof, said indexer being received in said indexing channel; and
 - a light source attached to the front surface of said seat.
2. A lighting assembly, comprising:
 - a thermally conductive mounting having a mounting surface; and
 - a heat sink seat having a front and rear surface, said heat sink seat being moveably mounted to said mounting surface, wherein the shape of said mounting surface corresponds to the shape of the rear surface of said heat sink seat, wherein the front surface of said heat sink seat is configured to receive a light emitting device.
3. The lighting assembly as claimed in claim 2, wherein said light emitting device is a light emitting diode (LED) thermally coupled to the front surface of said heat sink seat.
4. The lighting assembly as claimed in claim 2, wherein said light emitting device is a Luxeon Star LED.
5. The lighting assembly as claimed in claim 3, wherein the rear surface of said heat sink seat forms a convex surface and said mounting surface forms a concave surface, and wherein the radius of said convex surface corresponds to the radius of said concave surface.
6. The lighting assembly as claimed in claim 5, wherein said mounting and said heat sink seat are formed of aluminum.
7. The lighting assembly as claimed in claim 2, wherein said heat sink seat includes a front portion forming a wedge for angling said light emitting device.

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8. The lighting assembly as claimed in claim 5, wherein said mounting defines an indexing channel for mounting said heat sink seat, and wherein said heat sink seat further includes an indexer at the rear surface thereof, said indexer being received in said indexing channel.

9. The lighting assembly as claimed in claim 8, wherein said mounting defines a plurality of indexing channels corresponding to a plurality of said heat sink seats.

10. The lighting assembly as claimed in claim 8, further comprising a collimator including a lens attached to the front surface of said heat sink seat, wherein said lens is operably positioned over said LED for focusing the light emitted therefrom.

11. The lighting assembly as claimed in claim 5, further comprising:
a plurality of LEDs thermally coupled to the front surface of said heat sink seat;
a plurality of collimators including a lens attached to the front surface of said heat sink seat, wherein each said lens is operably positioned over one LED in the plurality of LEDs for focusing the light emitted therefrom.

12. The lighting assembly as claimed in claim 10, further comprising a heat sink slug thermally connected to said LED and thermally coupled to the front surface of said heat sink seat.

13. The lighting assembly as claimed in claim 12, further comprising a thermally conductive substrate having a top and bottom surface, wherein the top surface of said substrate is thermally connected to said heat sink slug, and wherein the bottom surface of said substrate is thermally connected to the front surface of said heat sink seat.

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14. The lighting assembly as claimed in claim 13, wherein the surface area of the bottom surface is sufficient to create an effective thermal circuit.

15. The lighting assembly as claimed in claim 10, wherein the radius of said concave surface is equal to or greater than the distance from the rear surface of said heat sink seat to a top surface of the collimator.

16. The lighting assembly as claimed in claim 8, wherein said mounting is a longitudinally extending thermally conductive mounting having a mounting surface and a major axis, and wherein said heat sink seat is moveably mounted along the major axis of said mounting.

17. The lighting assembly as claimed in claim 8, wherein said indexing channels are transverse indexing channels.

18. The lighting assembly as claimed in claim 8, wherein said indexing channel includes an upper and lower limit position defined by the respective ends of said indexing channel, wherein said heat sink seat is moveable between said upper and lower limit positions.

19. The lighting assembly as claimed in claim 8, further comprising a longitudinally extending thermally conductive housing defining an aperture on a first wall thereof, and wherein said mounting includes a mounting portion, and wherein said mounting portion is thermally connected to said housing, and wherein said LED may be aimed through said aperture at an area or object to be illuminated.

20. The lighting assembly as claimed in claim 8, wherein said mounting further includes a rearward side and a plurality of longitudinally extending fins extending from the rearward side of said mounting.

21. A heat sink, comprising:
a thermally conductive mounting having a mounting surface; and

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a heat sink seat having a front and rear surface, said heat sink seat being moveably mounted to said mounting surface.

22. The heat sink as claimed in claim 21, wherein the shape of said mounting surface corresponds to the shape of the rear surface of said heat sink seat.

23. The heat sink as claimed in claim 21, wherein the mounting further includes a plurality of fins extending longitudinally and outwardly from a rear surface of the mounting.

24. A heat recovery system, comprising:

a lighting assembly as claimed in any one of claims 2 to 19; and

a heat exchanger tube provided on a rear surface of the mounting for carrying a heat exchange fluid, the heat exchanger tube having an inlet end for receiving the heat exchange fluid at a relatively low temperature and an outlet end for discharging the heat exchange fluid at a relatively high temperature.

25. The heat recovery system as claimed in claim 24, wherein the heat exchanger tube is a U-shaped tube extending longitudinally of the mounting with the inlet and outlet end of the heat exchanger tube being disposed towards a common end of the mounting.

26. The heat recovery system as claimed in claim 24, wherein the rear surface of the mounting defines a channel for receiving the heat exchanger tube.

27. The heat recovery system as claimed in claim 24 or 25, wherein the mounting further includes a plurality of fins extending longitudinally and outwardly from the rear surface of the mounting.

28. The heat recovery system as claimed in claim 27, wherein the fins are radially extending.

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29. A heat recovery system, comprising:

a thermally conductive mounting having a rear surface and a mounting surface;

a heat sink seat having a front and rear surface, the heat sink seat being moveably mounted to the mounting surface;

a light emitting device mounted to the front surface of the heat sink seat; and

a heat exchanger tube provided on the rear surface of the mounting for carrying a heat exchange fluid, the heat exchanger tube having an inlet end for receiving the heat exchange fluid at a relatively low temperature and an outlet end for discharging the heat exchange fluid at a relatively high temperature.

30. The heat recovery system as claimed in claim 29, wherein the heat exchanger tube is a U-shaped tube extending longitudinally of the mounting with the inlet and outlet end of the heat exchanger tube being disposed towards a common end of the mounting.

31. The heat recovery system as claimed in claim 30, wherein the rear surface of the mounting defines a pair of spaced apart channels for receiving the U-shaped heat exchanger tube.

32. The heat recovery system as claimed in any one of claims 29 to 31, wherein the mounting further includes a plurality of fins extending longitudinally and outwardly from the rear surface.

33. The heat recovery system as claimed in claim 32, wherein the fins are radially extending.

34. The heat recovery system as claimed in claim 32, wherein the fins defining a plurality of channels therebetween for receiving the heat exchanger tube.

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35. The heat recovery system as claimed in claim 29, further comprising:
a plurality of heat exchanger tubes provided on the rear surface of the mounting for carrying a heat exchange fluid, each heat exchanger tube having an inlet end for receiving the heat exchange fluid at a relatively low temperature and an outlet end for discharging the heat exchange fluid at a relatively high temperature;

wherein the rear surface of the mounting defines a plurality of channels therebetween for receiving one of the heat exchanger tubes.

36. The heat recovery system as claimed in claim 35, further comprising:
an inlet chamber provided at and in fluid communication with the inlet end of the heat exchanger tubes, the inlet chamber defining an opening for receiving heat exchange fluid at a relatively low temperature from a source of heat exchange fluid; and

an outlet chamber provided at and in fluid communication with the outlet end of the heat exchanger tubes, the outlet chamber defining an opening for discharging heat exchange fluid at a relatively high temperature.

37. The heat recovery system as claimed in claim 29, wherein the light emitting device is a light emitting diode thermally coupled to the front surface of the heat sink seat.

38. The heat recovery system as claimed in any one of claims 29 to 37, wherein the shape of the mounting surface corresponds to the shape of the rear surface of the heat sink seat.